

### REMARKS

Applicant has amended independent claims 47, 51, 61, and 64 and dependent claims 50, 57 and 68. Applicant has also cancelled claim 53. Claims 47-52, 54-66 and 68 are currently pending in this application.

In the Office Action, the Examiner objected to claim 68 as being dependent on a cancelled claim. Applicant has amended the claim to depend from independent claim 64 which is a currently pending claim. Withdrawal of the objection is respectfully requested.

More substantively, the Examiner continued to reject claims 47-66 and 68 under 35 U.S.C. Section 103(a) as being obvious over Zhang (U.S. Patent No. 5,881,130) in view of Liu (U.S. Patent No. 6,266,395) further in view of Galli (U.S. Patent No. 6,538,451). Although the claims have been amended, Applicant respectfully traverses the rejection to the extent that the rejection applies to the amended claims.

In the sole interest of advancing prosecution of this application, Applicant has amended all independent claims 47, 51 and 61 and 64 to include the feature of "obtaining a return waveform by using a TDR at a customer side of the wire communication line" such that **the single-ended testing occurs all at the customer side**. In other words, all testing occurs not from the central office/switch side, but from the customer side (e.g., the customer end where an xDSL modem is to be

located or at a cross box located near the customer premise that connects the wire line going to the customer end). This novel feature is taught on page 5, lines 17-29 and illustrated in FIG. 1 of the present specification. Accordingly, Applicant submits that no new matter is added.

This important feature is not disclosed in any of the cited references. In fact, all of the references teach the opposite of running tests solely from the other side (CO/switch side). In Zhang, Figures 1 and 2 and related description at col. 3, lines 10-18 show that the testing device 200 which is part of the measurement unit 116 is connected to the central office end and all measurements are made "*through switch 114*" (emphasis added).

In Liu, For Liu, col. 2, lines 52-56, for example, states that all electrical characteristics are determined from "*a CO end of the subscriber loop*" (emphasis added).

Similarly in Galli, col. 2, lines 55-67 states that the "*single ended testing requires test-equipment only at the CO.*" (emphasis added).

The Examiner cited Liu as teaching the step of measuring wideband noise at the customer side and combined this feature with Zhang to assert that claim 1 is obvious. As discussed above, however, both Zhang and Liu are designed to test the wire lines solely from the CO/switch side to achieve their main goal of single-ended analysis. If the two references were combined as the Examiner suggested, the combination would


destroy the very purpose of Zhang and Liu of single-ended testing. Accordingly, Applicant submits that claim 1 is patentable over the combination of Zhang and Liu.

For the similar reasons as discussed above, Applicant submits that independent claims 51, 61, and 64 are patentable.

Dependent claims 48-50, 52, 54-60 and 62-63, 65-66 and 68 are also considered to be patentable by virtue of their dependency from respective independent claims 47, 51 and 61 and 64.

Based upon the above amendments and remarks, Applicant respectfully requests reconsideration of this application and its early allowance. Should the Examiner feel that a telephone conference with Applicant's attorney would expedite prosecution of this application, the Examiner is urged to contact him at the number indicated below.

Respectfully submitted,

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